

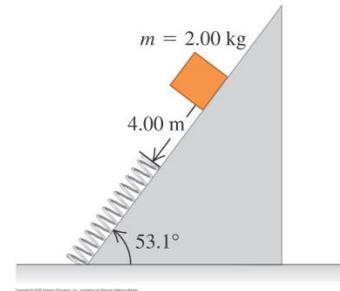
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## PHYS 1210 Worksheet: Conservation of Energy

A 2-kg block is released from rest on a  $53.1^\circ$  incline 4.0 m from a spring with  $k = 120 \text{ N/m}$  that is attached at the bottom of the slope. The coefficients of friction between the block and the slope are  $\mu_s = 0.40$  and  $\mu_k = 0.20$ .

A. Find the speed of the block just before it reaches the spring.



B. Find the maximum compression distance of the spring.

C. The block rebounds back up the slope. How close does it get to its initial position?